

## REMARKS

The Office Action mailed December 21, 2006 considered claims 1-11 and 36-38. Claims 1 and 36 were objected to because of the following informalities: in the body of the claims applicant recite "can be". Claims 1 and 36 recite "to efficiently generate. The recitation is not functional, quantitative language it does not recite definite meaning. Claims should be amended to delete "efficiently" and only to state "to generate"

Claims 1-2, 4, 7, 9-11 and 36-38 were rejected under 35 U.S.C. 103(a) as being unpatentable over *Chu et al.* (US 6,493,720) hereinafter *Chu* in view of *Zondervan et al.* (US 6,516,327) hereinafter *Zondervan*. Claims 3, 5 and 8 were rejected under 35 U.S.C. 103(a) as being unpatentable over *Chu* in view of *Zondervan* and further in view of Jim Challenger, Arun Iyengar, Paul Dantzig "A Scalable System for Consistently Caching Dynamic Web Data", hereinafter *Challenger et al.* Claim 6 was rejected under 35 U.S.C. 103(a) as being unpatentable over *Chu* in view of *Zondervan* and further in view of *Dettinger et al.* (US 2003/0093413) hereinafter *Dettinger*.<sup>1</sup>

By this amendment claims 1, 11, and 36 have been amended and claim 10 cancelled. Claims 50-59 are new.<sup>2</sup> Claims 1-9, 11, 36-38, and 50-59 are pending, of which claims 1 and 36 are the independent claims at issue.

The present invention is generally directed to registering for and retrieving database table change information that can be used to invalidate cache entries. Claim 1, for example, recites formulating a Web based response in response to receiving a Web based request for database content. Claim 1 defines an act of selecting a data table that is to be monitored for content changes, the selected data table selected from among the one or more data tables of the database. Next, claim 1, defines an act of inserting a record for the selected data table into a separate change notification table. The record includes versioning information identifying and corresponding to the selected data table. The versioning information is retrievable by the Web

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<sup>1</sup> Although the prior art status of the cited art is not being challenged at this time, Applicant reserves the right to challenge the prior art status of the cited art at any appropriate time, should it arise. Accordingly, any arguments and amendments made herein should not be construed as acquiescing to any prior art status of the cited art.

<sup>2</sup> Support for the amendments to the claims are found throughout the specification, Figures, and previously presented claims, including, paragraphs [0040], [0044], [0052] – [0056], [0064], [0066], [0073], [0082], [0085], [0086], [0090], and Figures 1, 2, 3, and 4.

server to determine when a corresponding cache entry containing cacheable content from the selected data table is invalid.

Next, claim 1 defines assigning a trigger to the selected data table. The trigger is configured to update the versioning information included in the record in the change notification table when content in the selected data table is altered. Next, claim 1 defines caching a cache entry that includes a portion of content from the selected data table in the cache. The cache entry includes the versioning information identifying and corresponding to the selected data table.

Next, claim 1 defines receiving a Web based request for the portion of content subsequent to caching the cache entry. Next, claim 1 defines querying the change notification table for versioning information identifying and corresponding to the selected data table. Next, claim 1, defines receiving current versioning information identifying and corresponding to the selected data table. Next, claim 1 defines comparing the cached versioning information to the current versioning information,

Next, claim 1 defines determining the location to retrieve the portion of content from for inclusion in a Web based response based on the results of comparing the versioning information in response to receiving the Web based request for the portion of content. Next, claim 1 defines retrieving the portion of content from the determined location. Lastly, claim 1 defines including the retrieved portion of content in a Web based response responsive to the Web based request.

Claim 36 is directed to a corresponding computer program product claim for implementing the method of claim 1.

*Chu* describes a method and system for synchronization of metadata in an information catalog. (Title). The metadata is included in a searchable information catalog that can be searched to determine what data is available. (Col. 5, ll. 1-38). Metadata assigned to objects is used to describe the objects. (Col. 6, ll. 52-56). Thus, generally, *Chu* describes searching metadata describing objects to locate objects of interest.

A metadata synchronizer monitors one or more objects processed by other tools to determine whether metadata for other objects has changed. (Col. 3, ll. 41-43). If metadata for an object has changed, the metadata synchronizer determines whether to modify metadata for that object in the information catalog. (Col. 3, ll. 46-48). The metadata synchronizer maintains timestamps for metadata of objects for comparison purposes and to determine whether the information catalog system or the source has the most current data. (Col. 7, ll. 48-51). The time

stamps can be used to resolve conflicts when multiple sources modify objects and their metadata (Col. 7, ll. 51-60).

*Zondervan* describes a system and method for synchronizing data in multiple databases. *Zondervan* describes the use of version ID mapping tables, delta tables, and replica ID tables that can be used to more effectively synchronize a secondary database (e.g., on a palmtop electronic device) with a distributed database system. (Abstract, Figure 4). An ID mapping table can comprise a plurality of entries, each entry of which contains a main database record identification number and a secondary database record identification number pairing. (Col. 6, ll. 21-23). The ID mapping table can be referred to determine if a secondary database is to be synchronized with a main database record or vice versa. (Col. 6, l. 38 – Col. 7, l. 40).

Thus, *Chu* and *Zondervan* disclose various mechanisms for synchronizing database data amongst different database locations and updating data stored in database locations. *Chu* and *Zondervan* essentially facilitate the mirroring of an operation performed on data in one location to another location. For example, if a data value is changed at one location, the changed data value is propagated to other relevant locations (e.g., replicas or data subsets). However, neither *Chu* nor *Zondervan* disclose or suggest determining where to access data from when data is stored in multiple locations.

Accordingly, the cited art neither discloses nor otherwise suggests determining the location to retrieve a portion of content from for inclusion in a Web based response based on the results of comparing versioning information in response to receiving a Web based request for the portion of content, as recited in claim 1. For at least this reason claim 1 patentably defines over the art of record. For at least the same reason, claim 36 also patentably defines over the art of record. Since the remaining dependent claims depend from one of the claims 1 or 36, and thus inherit all of the limitations from either claim 1 or 36, the dependent claims patentably define over the art of record at least for the same reason as either claim 1 or 36.

Further a number of the dependent claims independently distinguish over the art of record. For example, the cited art neither discloses nor otherwise suggests invalidating a cache entry that includes a portion of content based on a comparison of version information in response to receiving a Web based request for the portion of content, as recited in claims 51 and 56. Similarly, the cited art neither discloses nor otherwise suggests retrieving a portion of content from a database table notwithstanding that the portion of content was cached at a computer

system when a Web based request for the portion of content was received, as recited in claims 53 and 58 or including a retrieved portion of content from a database table in a Web based response not withstanding that the portion of content was cached at the computer system when a Web based request for the portion of content was received, as recited in claims 54 and 59.

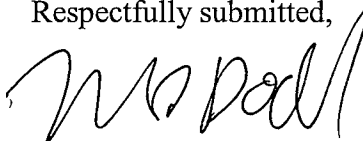
Claims 1 and 36 were objected to because of the following informalities: in the body of the claims applicant recite "can be". Also, claims 1 and 36 recite "to efficiently generate. The recitation is not functional, quantitative language it does not recite definite meaning. Claims should be amended to delete "efficiently" and only to state "to generate". The objected to language in claims 1 and 36 has been removed. Applicants submit that these objections are now moot and respectfully request withdrawal of the objections.

In view of the foregoing, Applicant respectfully submits that the other rejections to the claims are now moot and do not, therefore, need to be addressed individually at this time. It will be appreciated, however, that this should not be construed as Applicant acquiescing to any of the purported teachings or assertions made in the last action regarding the cited art or the pending application, including any official notice. Instead, Applicant reserves the right to challenge any of the purported teachings or assertions made in the last action at any appropriate time in the future, should the need arise.

In the event that the Examiner finds remaining impediment to a prompt allowance of this application that may be clarified through a telephone interview, the Examiner is requested to contact the undersigned attorney at 801-533-9800.

Dated this 21<sup>st</sup> day of March, 2007.

Respectfully submitted,



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